



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = **63.6**

Intel DH77KC motherboard (Intel Core i5-3570S)

SPECfp_base2006 = **61.7**

CPU2006 license: 13

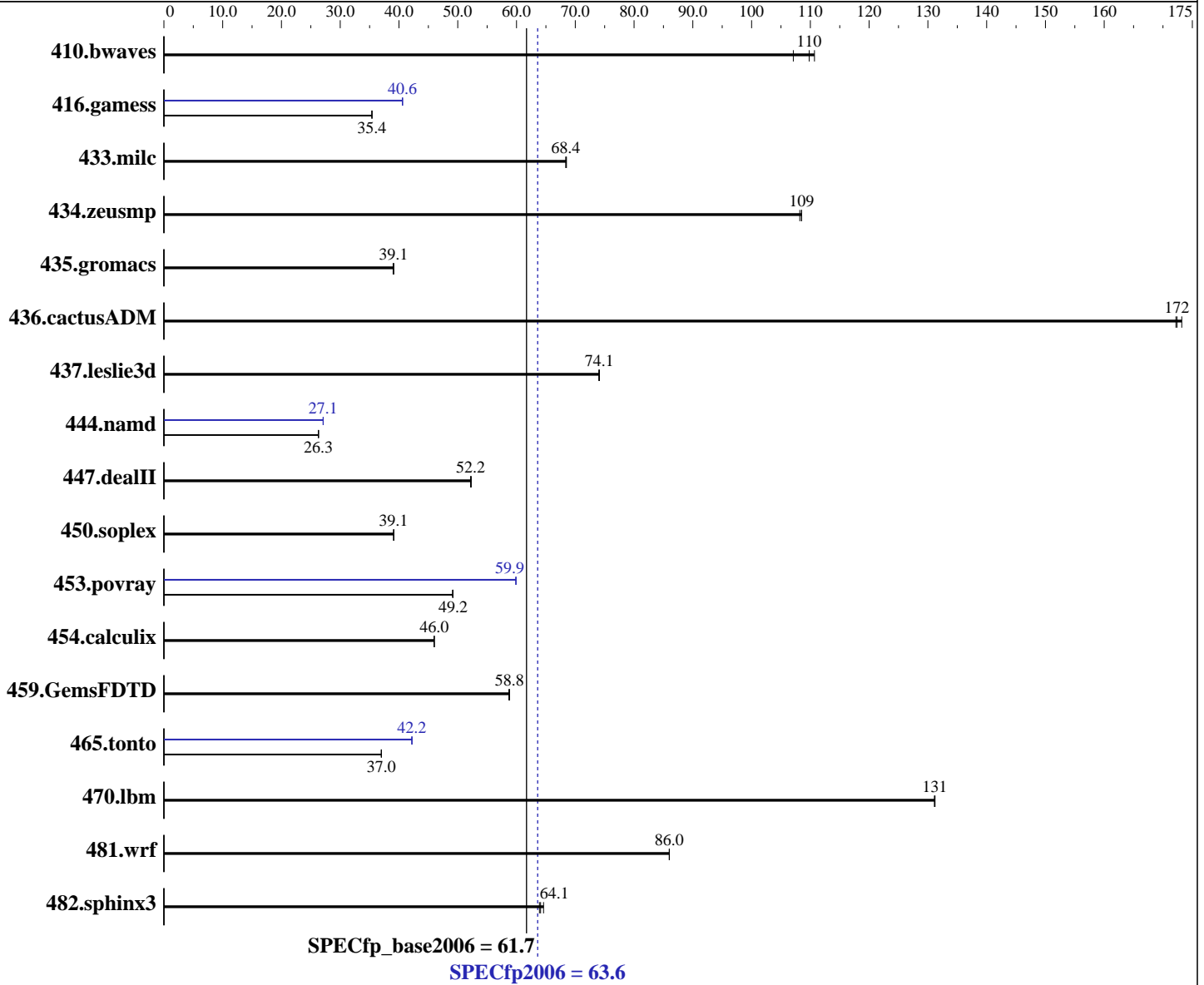
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2012

Hardware Availability: Apr-2012

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i5-3570S
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 3100
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

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Software

Operating System: Microsoft Windows 7 Ultimate (64-bit)
 6.1.7601 Service Pack 1 Build 7601
 Compiler: C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows;
 Fortran: Version 12.1.0.229 of Intel Fortran Studio XE for Windows;
 Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
 Auto Parallel: Yes
 File System: NTFS

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L3 Cache: 6 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx4 PC3-12800U-11)
Disk Subsystem: 1 TB Seagate SATA, 7200 RPM
Other Hardware: None

System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: SmartHeap Library Version 9.01 from <http://www.microquill.com/>

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	124	110	123	111	127	107	124	110	123	111	127	107
416.gamess	554	35.4	554	35.4	554	35.4	482	40.6	483	40.6	483	40.6
433.milc	134	68.5	134	68.4	134	68.4	134	68.5	134	68.4	134	68.4
434.zeusmp	84.1	108	83.9	109	83.9	109	84.1	108	83.9	109	83.9	109
435.gromacs	183	39.1	183	39.1	183	39.0	183	39.1	183	39.1	183	39.0
436.cactusADM	69.3	172	69.0	173	69.4	172	69.3	172	69.0	173	69.4	172
437.leslie3d	127	74.1	127	74.1	127	74.0	127	74.1	127	74.1	127	74.0
444.namd	305	26.3	305	26.3	305	26.3	296	27.1	296	27.1	295	27.1
447.dealII	219	52.2	219	52.3	219	52.2	219	52.2	219	52.3	219	52.2
450.soplex	214	39.1	213	39.1	213	39.1	214	39.1	213	39.1	213	39.1
453.povray	108	49.1	108	49.2	108	49.2	88.8	59.9	88.8	59.9	88.8	59.9
454.calculix	179	46.0	179	46.0	179	46.0	179	46.0	179	46.0	179	46.0
459.GemsFDTD	181	58.7	181	58.8	181	58.8	181	58.7	181	58.8	181	58.8
465.tonto	266	37.0	266	37.0	266	37.0	233	42.2	233	42.2	233	42.2
470.lbm	105	131	105	131	105	131	105	131	105	131	105	131
481.wrf	130	86.0	130	86.0	130	86.0	130	86.0	130	86.0	130	86.0
482.sphinx3	304	64.1	305	63.9	302	64.6	304	64.1	305	63.9	302	64.6

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Invocation Notes

To compile these binaries, the Intel Compiler was set up to generate 64-bit binaries with the command: "ipsxe-comp-vars.bat intel64 vs2008" (shortcut provided in the Intel(r) Parallel Studio XE 2011 program folder)

Platform Notes

Sysinfo program C:\CPU200~1.17A/Docs/sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on CltE840F20AAB2E Tue May 15 22:13:13 2012

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Trying 'systeminfo'

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Platform Notes (Continued)

```

OS Name      : Microsoft Windows 7 Ultimate
OS Version   : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: INTEL_
System Model  : DH77KC__
Processor(s) : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 58 Stepping 9 GenuineIntel ~3101 Mhz
BIOS Version : Intel Corp. KCH7710H.86A.0069.2012.0224.1825, 2/24/2012
Total Physical Memory: 8,090 MB

```

```

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 1024
L3CacheSize   : 6144
MaxClockSpeed : 3101
Name          : Intel(R) Core(TM) i5-3570S CPU @ 3.10GHZ
NumberOfCores : 4
NumberOfLogicalProcessors: 4

```

(End of data from sysinfo program)

Component Notes

Tested systems can be used with Shin-G ATX case, PC Power and Cooling 1200W power supply

General Notes

```

OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
Binaries compiled on a system with 1x Intel Core i7-860 CPU
+ 8GB memory using Windows 7 Enterprise 64-bit

```

Base Compiler Invocation

```

C benchmarks:
  icl -Qvc9 -Qstd=c99

C++ benchmarks:
  icl -Qvc9

Fortran benchmarks:
  ifort

Benchmarks using both Fortran and C:
  icl -Qvc9 -Qstd=c99 ifort

```



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Base Portability Flags

```

410.bwaves: -DSPEC_CPU_P64 -names:lowercase
416.gamess: -DSPEC_CPU_P64
433.milc: -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -DSPEC_CPU_P64
436.cactusADM: -DSPEC_CPU_P64 -names:lowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -DSPEC_CPU_P64 -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -names:lowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -DSPEC_CPU_P64

```

Base Optimization Flags

C benchmarks:

```

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

```

C++ benchmarks:

```

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE

```

Fortran benchmarks:

```

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
/F1000000000

```

Benchmarks using both Fortran and C:

```

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

```

Peak Compiler Invocation

C benchmarks:

```

icl -Qvc9 -Qstd=c99

```

C++ benchmarks:

```

icl -Qvc9

```

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Peak Compiler Invocation (Continued)

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc9 -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000 sh1w64M.lib
-link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32
/F1000000000 sh1w64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep-
/F1000000000

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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Peak Optimization Flags (Continued)

459.GemsFDTD: basepeak = yes

465.tonto: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll4 -Qauto -Qinline-calloc
/F1000000000

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.xml>

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For other inquiries, please contact webmaster@spec.org.

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